

**From:** [AccardiDey, AmyMarie](#)  
**To:** [Smeraldi, Josh](#); [Sivak, Michael](#); [Flynn, Kathryn](#); [Olsen, Marian](#); [Nace, Charles](#); [Franklin, Elizabeth A NWK \(Elizabeth.A.Franklin@usace.army.mil\)](#)  
**Cc:** [Warner, Leonard](#); [Frederick, Jeffrey](#); [Bounkhay, Mina](#); [Califano, Richard](#)  
**Subject:** RE: Follow-up Action Items from the Riverside April 15 Presentation  
**Date:** Wednesday, April 22, 2020 9:31:56 AM  
**Attachments:** [image001.png](#)  
[Arsenic Riverside RI Figure 4-36.pdf](#)  
[Lead Riverside RI Figure 4-36.pdf](#)  
[NJ Ambient Groundwater Network 1999-2004.pdf](#)  
[Riverside Lead and Arsenic in Groundwater.pdf](#)

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Josh – Our second action item from the April 15 presentation was to summarize the Arsenic and Lead in groundwater. Our thoughts are presented in the outline below. I attached four files to this email:

1. The groundwater ARARs for **Lead** is **5 ug/L**. The groundwater ARARs for **Arsenic** is **0.02 ug/L**
2. At Riverside, in the “deep” wells (about 25 feet bgs):
  - a. Arsenic exceeds the PAL in all five wells (ranging from 1 to 26.7 ug/L).
  - b. There are no Lead exceedances in the deep wells (with concentrations ranging from 0.63-1.6 ug/L).
  - c. Other metals that have occasional exceedances in the “deep” wells are: iron, manganese, sodium, and cyanide.
3. At Riverside, in the “shallow” wells (about 10 feet bgs) – see attached figures from the RI Report:
  - a. Arsenic exceeds the PAL in all shallow wells for all three sampling events (ranging from 0.63-38.6 ug/L).
  - b. Lead exceedances focus around the bulkhead and Building 7 and 12 where the contaminated lead soils are located.
  - c. Other metals that have exceedances in the “shallow” wells are: iron, manganese, sodium, cyanide, and cobalt
  - d. Please note that shallow wells along the bulkhead are likely influenced by the Passaic surface water. For reference, during the 2018-2019 Passaic PDI, surface water Lead concentrations ranged from 0.13 to 82 ug/L. We have no Arsenic values for this program.
4. NJ Ambient Groundwater Network (attached):
  - a. NJDEP reported ambient groundwater metals concentrations. Please look at Figure 3 on page 2 in the attached . The ambient Arsenic levels in urban wells (red squares) in Northern New Jersey range from **0.1 to 30 ug/L**, which is consistent with the concentrations reported at Riverside (**1 to 26.7 ug/L** in deep wells and **0.63-38.6 ug/L** in shallow wells). Because the Arsenic concentrations at the site are similar in the deep wells and shallow wells, and because they are similar to ambient levels, it appears that the Arsenic groundwater levels may not be related to site activities.
  - b. In the same article, ambient Lead groundwater concentrations in wells from urban areas ranged from **0.5-4 ug/L**. At Riverside, the Lead groundwater concentrations in the deep wells are similar ranging from **0.63-1.6 ug/L**. However, the shallow wells have Lead concentrations ranging from **0.28-568 ug/L**. The highest Lead groundwater concentrations at the Site are on Lot 57 by Building 57 (MW-118 at 568 ug/L) followed by multiple wells on Lot 63 and Lot 64 (MW-108 at 109 ug/L and others). The Lead in

the groundwater near Lot 63 and Lot 64 are likely site-related.

5.

**Exemption 5, Deliberative**

6. The Feasibility Study will need to propose a remedy for Arsenic and Lead in groundwater in conjunction with institutional controls to meet the RAO of “restore groundwater quality” since the groundwater at the site is classified as a Class IIA aquifer. [REDACTED]

**Exemption 5, Deliberative**

7.

**Exemption 5, Deliberative**

Regards

AM

AmyMarie Accardi-Dey, PhD, PG, CPC  
Phone: 1-914-620-5110

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**From:** AccardiDey, AmyMarie

**Sent:** Wednesday, April 22, 2020 8:56 AM

**To:** Smeraldi, Josh <Smeraldi.Josh@epa.gov>; Sivak, Michael <Sivak.Michael@epa.gov>; Flynn, Kathryn <Flynn.Kathryn@epa.gov>; Olsen, Marian <Olsen.Marian@epa.gov>; Nace, Charles <Nace.Charles@epa.gov>; Franklin, Elizabeth A NWK (Elizabeth.A.Franklin@usace.army.mil) <Elizabeth.A.Franklin@usace.army.mil>

**Cc:** Warner, Leonard <len.warner@wsp.com>; Frederick, Jeffrey <Jeffrey.Frederick@wsp.com>; Bounkhay, Mina <mina.bounkhay@wsp.com>; Califano, Richard <Richard.Califano@wsp.com>

**Subject:** Follow-up Action Items from the Riverside April 15 Presentation

Josh – One of our action items from the April 15 presentation was to summarize the BHHRA risks or hazards versus ARARs. Please see that attached MS Excel table from Rick, which summarizes these potential hazards. There are two tabs: one for groundwater and one for soils.

For completeness, I also re-attached to this email the April 15 presentation and the PPG FS Flow Chart. Preliminary Remedial Goals (PRGs) will be assigned for constituents that are risk drivers as

well as constituents that are non-compliant with ARARs.

Regards

AmyMarie and Rich

AmyMarie Accardi-Dey, PhD, PG, CPC

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**From:** AccardiDey, AmyMarie

**Sent:** Tuesday, April 14, 2020 4:10 PM

**To:** Smeraldi, Josh <[Smeraldi.Josh@epa.gov](mailto:Smeraldi.Josh@epa.gov)>; Sivak, Michael <[Sivak.Michael@epa.gov](mailto:Sivak.Michael@epa.gov)>; Flynn, Kathryn <[Flynn.Kathryn@epa.gov](mailto:Flynn.Kathryn@epa.gov)>; Olsen, Marian <[Olsen.Marian@epa.gov](mailto:Olsen.Marian@epa.gov)>; Nace, Charles <[Nace.Charles@epa.gov](mailto:Nace.Charles@epa.gov)>; Franklin, Elizabeth A NWK ([Elizabeth.A.Franklin@usace.army.mil](mailto:Elizabeth.A.Franklin@usace.army.mil)) <[Elizabeth.A.Franklin@usace.army.mil](mailto:Elizabeth.A.Franklin@usace.army.mil)>

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**Subject:** Riverside Presentation Slides for internal call on Wednesday April 15 at 11am

Josh – Attached are the Riverside presentation slides for tomorrow's internal call (Wed April 15 at 11am). I am sending the slides to you in advance of the conference call. Talk to you tomorrow.

Regards

AM

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